

# RECLAMATION

*Managing Water in the West*

## **Cedarville Rancheria Drought Assistance Project**

Cedarville, California

### **Final Environmental Assessment**



U.S. Department of the Interior  
Bureau of Reclamation

July 2010

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# **1.0 Purpose and Need**

## **1.1 Introduction**

Under the *State's Emergency Drought Relief Act of 1991* as amended (Public Law [P.L.] 109-234), the Bureau of Reclamation (Reclamation) is distributing \$40 million from the American Recovery and Reinvestment Act (ARRA) (P.L. 111-5) to fund emergency drought relief projects. In February 2009, while the State of California was in its third consecutive year of drought, Governor Arnold Schwarzenegger declared a drought emergency.

The Cedarville Rancheria (Rancheria) is a federally recognized Indian Tribe consisting of approximately 29 tribal members. The Rancheria is located on 26 acres in Cedarville (approximately 20 miles east of Alturas), Modoc County, California (Figure 1).

## **1.2 Purpose and Need**

The purpose of the project is for Reclamation to provide ARRA funds to the Rancheria for the purposes of drilling and developing a production well and electrical power.

This environmental assessment (EA): (1) describes the existing environmental resources in the project area; (2) evaluates the effects of the alternatives (including the Proposed Action) on the resources; and, (3) proposes measures to avoid, minimize, or mitigate any adverse effects. This EA is in compliance with the National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508). Reclamation has also prepared a Finding of No Significant Impact (FONSI) which explains why the Proposed Action will not have significant effect on the human environment.

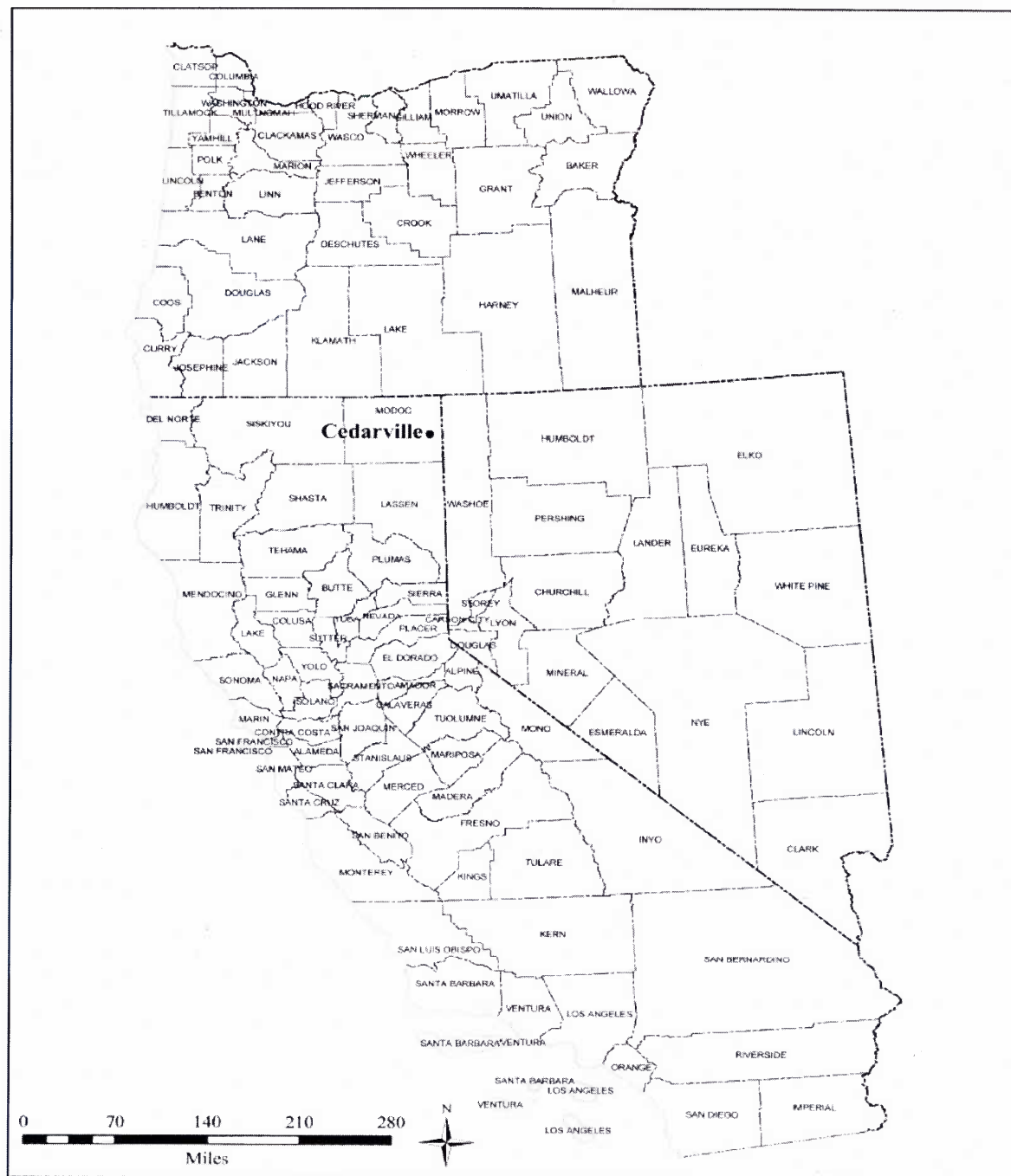


Figure 1. The project is located on Tribal lands near Cedarville, California.

## **2.0 Alternatives**

### **2.1 Alternative 1 - No Action**

Under the No Action alternative, Reclamation would not provide funds to the Rancheria under ARRA to establish a new production well.

### **2.2 Alternative 2 - Proposed Action**

The Rancheria proposes to construct one drinking water well to supplement the existing residential water service and provide water for future development of a greenhouse. The initial phase of well development would involve drilling a test well to determine appropriate placement and construction of facilities. Construction of the test well would include drilling the well, connecting a pump, and installing an overhead power line and power pole. Up to approximately 100 feet of power line would connect the well site to the existing system. The test well would be drilled up to 300-350 feet deep by a street-legal truck-mounted drill rig using an 8-inch or 10-inch diameter bore.

Depending on the results of the test well, additional construction may include installing a concrete pad around the well head, building a wood frame pump house, and installing a hose bib at the well site. If a well site is determined not suitable, the well would be capped with gravel and concrete and abandoned in place per the County Health Department requirements. The proposed well sites will be accessed from paved and graveled roads and residential driveways. Staging of equipment and materials will occur adjacent to each well site.

Work Period. All elements of the Proposed Action would take place prior to December 1, 2010 or prior to September 30, 2011. Total time to implement the Proposed Action is estimated to be between 60 and 90 days.

Well Details. The Proposed Action involves drilling a well 350 feet deep that would provide up to 250 gallons per minute (gpm) of water for irrigation use. The contractor would 1) drill a nominal 18-inch diameter hole from 0 to 50 feet; install and grout 14-inch diameter steel conductor casing from 0 to 50 feet; 2) drill a nominal 6-inch diameter pilot hole from 50 to 350 feet deep; 3) geophysically log hole; 4) determine if the hole shows potential for producing a sufficient quantity of water. If not, determine whether to drill deeper or abandon; 5) if hole shows potential for producing sufficient quantity of water, ream hole to nominal 12-inch diameter from 50-350 feet; 6) install 8-inch diameter blank casing from the top of the screened interval to the surface; 7) install filter pack from the bottom of the hole to the bottom of the conductor casing; 8) clean and develop the well using industry standards adding filter pack as necessary to maintain the level; 9) install bentonite and grout plug to seal from top of filter pack to surface; 10) conduct all well tests required to meet all regulatory requirements; 11) construct a minimum 4-inch thick concrete pad around the well head that extends at least two feet laterally in all directions, sloped to drain surface water away from the well (concrete shall be 3000 psi or stronger); 12) coordinate details of site access, connection, outages, and scheduling with other



contractors, local agencies, and users. Well construction shall comply with California's Department of Water Resources Well Standards. This EA considers the worst-case scenario because no project-level design has been prepared for Proposed Action.

The work area, approximately 1.5 acres in size, encompasses the area where staging, access, drilling and development of a production well.

Electric Power Details. Electrical power would be necessary to make the production well fully operable. The Proposed Action involves providing power to the new well. The Rancheria would coordinate with local power company regarding electric service application. The contractor would furnish and install one pole mounted transformer and all necessary electric components (e.g., meter, circuit breaker, conduit, wire, etc) to meet current National Electric Code (NEC) standards.

## **3.0 Affected Environment & Environmental Consequences**

### **3.1 Resources Considered**

Evaluation of the Proposed Action indicates the following resources could be affected by the project:

- wildlife and vegetation
- cultural resources
- water resources
- environmental justice
- Indian Trust Assets
- climate change

Analysis of effects is based upon NEPAs *context* and *intensity* as described in 40 CFR 1508.27.

### **3.2 Resources Not Analyzed in Detail**

Evaluation of the Proposed Action indicates that there would be little to no indirect, direct or cumulative effects on several resources. The resources include:

- air quality
- geology and soils
- hazards and hazardous materials
- noise
- mineral resources
- traffic and transportation
- recreation
- agricultural resources

- land use
- public services
- utilities
- socioeconomics

As a result, these resources are not discussed further in this EA.

### 3.3 Wildlife and Vegetation

#### 3.3.1 Affected Environment

Setting. The Reservation is located in northeastern California in Modoc County. The Reservation elevation is approximately 4,609 feet (project area). The area is in the Modoc Plateau province, and has annual average precipitation ranging from over 35 inches in the Warner Mountains to 12.5 inches in the Cedarville area.

Vegetation. The vegetation in the Cedarville area is a mixed juniper/sagebrush community. The most common tree in the area is the western juniper (*Juniperus occidentalis*). The tree cover is open, interspersed with Great Basin sagebrush (*Artemisia tridentate*), rabbitbrush (*Chrysothamnus parryi*), and non-native annual grasses.

Wetlands. There are no wetlands in the project area.

Wildlife. A variety of wildlife may use the habitats that occur near Cedarville. The following are typical of the animals found in the project vicinity: mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*), sage grouse (*Centrocercus urophasianus*) and western gray squirrel (*Sciurus griseus*).

Special-Status Species. The California Natural Diversity Database (CNDDDB) and U.S. Fish and Wildlife Service websites were reviewed for the potential occurrence of federally-listed special-status species. No special-status wildlife species have been recorded within a five mile radius of the project area (CNDDDB, 2010, USFWS, 2010).

#### 3.3.2 Environmental Consequences

##### *No Action*

Under the No Action alternative, Reclamation would not provide funds under ARRA for the purposes of establishing a new well. Without the additional infrastructure, in the event of drought, the Rancheria may be unable to provide reliable drinking water. There would be no impacts to wildlife and vegetation under the No Action alternative.

### ***Proposed Action***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new well.

**Vegetation.** The project area is located within the Great Basin Sagebrush Belt/Sagebrush Scrub Community (Storer and Usinger 1963, Scheonherr 1992, Sawyer and Keeler-Wol 1995), a very common habitat in the area. Western or Sierra Junipers (*Juniperus occidentalis*) are found in the vicinity. Remnant native vegetation present in the vicinity of the area include Big Sagebrush (*Artemisia tridentata*) and Rabbit Brush or Chamisa (*Chrysothamnus nauseosus*). Most of the project area is covered with sparse grasses.

The surrounding area of Cedarville, including the subject property, supports small populations of mammals and upland birds and provides resting areas for migrating species of ducks and geese. Many species of small mammals, several large migratory mammals, and upland birds make there their home in the mountains and on the lakeshore and upland areas around Cedarville. Cedar Creek is the only major water source near Cedarville capable of sustaining a limited trout fishery. Middle Alkali Lake, cannot sustain any fishery, primarily because of its chemical constituents and the fact that the lake does not sustain water for any length of time. Little, if any, fisheries management can be accomplished because of the arid summer climate. Middle Alkali Lake hosts a variety of year-round resident shore birds and migrating waterfowl.

Plant and animal species are considered sensitive if they have been listed as such by federal or state resource agencies. The U.S. Fish and Wildlife Service provide a species list of listed, proposed and candidate species that may occur in Modoc County (Appendix B). Species on the list included federally endangered Modoc sucker, (*Catostomus microps*); Shortnose sucker (*Chasmistes brevirostris*); Oregon Spotted frog (*Rana Pretiosa*); and Northern spotted owl (*Strix occidentalis caurina*). Due to lack of habitat, none of the listed sensitive species are expected to be present on the property for the proposed project.

All elements of the Proposed Action would occur within a vegetation community made up of juniper and sagebrush. This habitat is relatively abundant in the region, and is not considered a sensitive resource. The production well site is primarily annual grasses. During construction, equipment and vehicles would use existing access roads, although there would be some traffic over the annual grasses. The production well site would be permanently impacted, but it would be limited to approximately 225 square feet.

As described in Table 3-1, there would be permanent loss of .02 acre of annual grasses as a result of the Proposed Action. The permanent loss of this habitat type would have a negligible impact on vegetation in the project area. There could be a temporary impact of up to 0.75 acre of vegetation made up of juniper, sagebrush, and annual grasses. While annual grasses can recover within one year, sagebrush is unlikely to recover fully for three to five years. Any trees removed would take a longer period of time to recover.



**Table 3-1 Habitat Type and Impacts**

<b>Activity</b>	<b>Habitat Type</b>	<b>Temporary Impact</b>	<b>Permanent Impact</b>
Well site	Annual grasses	.5 acre	.02 acre
Electrical power	Annual grasses	.25 acre	none
<b>Totals</b>		.75 acres	.02 acre

Wetlands. There are no wetlands in the project area. The Proposed Action would have no impact on wetlands.

Wildlife. During construction, there would be a minor increase in personal and vehicle traffic in the work area. During construction, wildlife is likely to avoid foraging or migrating through the area. Work is expected to occur during the summer or fall, a period that wildlife uses this area most. Up to 0.75 acre of annual grasses would be disturbed. The result is to have a temporary, negligible impact on wildlife.

Special-Status Species. No documented observations of special-status species has occurred in the project area. The Proposed Action would have no impact on special-status species.

### ***Cumulative Effects***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new well. The construction of a new well is a short-term project. There would be a temporary loss of vegetation, composed mainly of shrubs and annual grasses. Perennial plants such as sagebrush could take three to five years to recover. There would be a negligible permanent loss of vegetation and wildlife habitat at the well site. The Proposed Action would have no significantly cumulative impacts on wildlife and vegetation.

## **3.4 Cultural Resources**

### **3.4.1 Affected Environment**

A cultural resource is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion on the National Register of Historic Places (NRHP). Those resources that are on, or eligible for inclusion on, the NRHP are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 Code of Federal Regulations (CFR) Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking would

have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects (APE) (Figure 2), determine if historic properties are present within that APE, determine the effect that the undertaking would have on historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

In an effort to identify historic properties, a Reclamation Archaeologist searched the cultural resources files located at the Bureau of Indian Affairs. Reclamation initiated a records search by the Northeastern Information Center in Chico, California on May 25, 2010 for the APE. Reclamation contracted ICF International, who conducted cultural resources surveys of the APE on June 29, 2010. No cultural resources were identified (Crawford 2010).

Consultation. Reclamation sent a letter to the Cedarville Rancheria on July 23, 2010 to invite their assistance in identifying sites of religious and cultural significance pursuant to the regulations at 36 CFR 800.3(f)(2) and 36 CFR Part 800.4(a)(4). Reclamation consulted with the State Historic Preservation Officer (SHPO) on July 28, 2010 regarding a findings of no historic properties affected pursuant to 36 CFR Part 800.4(d)(1). Reclamation also consulted with the Cedarville Rancheria on the same basis as the SHPO on July 29, 2010 pursuant to the regulations at 36 CFR Part 800.3(d) since this project is located on Tribal lands. Concurrence from the SHPO and Cedarville Rancheria to conclude the Section 106 compliance process is pending.

### **3.4.2 Environmental Consequences**

#### ***No Action***

Under the No Action alternative, Reclamation would not provide funds under ARRA for the purposes of establishing a new well. Conditions related to cultural resources would remain the same as existing conditions. There would be no impacts to cultural resources under the No Action alternative.

#### ***Proposed Action***

The Proposed Action is the type of activity that has the potential to affect historic properties. A records search, pedestrian survey, and Tribal consultation failed to identify any historic properties within the project area. Since no historic properties would be affected, no cultural resources would be impacted as a result of implementing the Proposed Action. Concurrence from the SHPO and Cedarville Rancheria to conclude the Section 106 compliance process is pending.

### ***Cumulative Effects***

The Proposed Action has the potential to affect cultural resources on the Rancheria. Since Reclamation determined that no historic properties will be affected, no cultural resources would be impacted as a result of implementing the Proposed Action. Reclamation consulted with the SHPO on July 28, 2010, as well as with the Cedarville Rancheria on July 29, 2010 on the same basis as the SHPO since this project is located on Tribal lands, regarding this determination. Concurrence from the SHPO and Cedarville Rancheria is pending. The project will not be implemented until the Section 106 compliance process has been completed.





## **3.5 Water Resources**

### **3.5.1 Affected Environment**

Surface Water. Cedar Creek is the closest surface water near the vicinity of the proposed action. The creek is located over .5 miles north of the well site. Domestic water service for the Rancheria is currently provided by the Cedarville Water District.

Groundwater. The project area is located in the Surprise Valley groundwater basin. The water-bearing formations consist of alluvium, alluvial fan and lake deposits. Re-charge is from infiltration of surface water into the base of the alluvial fans that are located below the mouths of canyons along the base of the Warner Mountains (DWR, 2010). As this region of California is generally arid, annual precipitation amounts have a bearing on groundwater re-charge rates. Ground water beneath this area flows generally in an easterly direction.

### **3.5.2 Environmental Consequences**

#### ***No Action***

Under the No Action alternative, Reclamation would not provide funds under ARRA for the purposes of establishing a new well. Without the additional infrastructure, in the event of drought, the Rancheria may be unable to provide reliable drinking water. There would be no impacts to water resources under the No Action alternative.

#### ***Proposed Action***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new well. Although no project-level design has been completed for this project, impacts to surface waters in the area are unlikely. Implementation of the Proposed Action would result in a negligible increase in the amount of draft of groundwater.

#### ***Cumulative Effects***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new. Implementation of the Proposed Action would result in a negligible increase in the amount of draft of groundwater. The Proposed Action would supply water for uses such as residential or agricultural purposes. The Proposed Action would have no significantly cumulative impacts on surface or groundwater.



## **3.6 Environmental Justice**

### **3.6.1 Affected Environment**

According to the U.S. Census, in 2000 Modoc County had a population of 9,449 people. Of that, 86% was white, as compared to the rest of the U.S. which was 75%. The American Indian population was 4%, as compared to the rest of the U.S. which was 0.9%. The median family income in Modoc County was \$35,978, as compared to \$50,046 for the rest of the U.S. Twenty-one percent of the population was below the poverty level (U.S. Census, 2000).

### **3.6.2 Environmental Consequences**

#### ***No Action***

Under the No Action alternative, Reclamation would not provide funds under ARRA for the purposes of establishing a new well. Without the additional infrastructure, in the event of drought, the Rancheria may be unable to provide reliable drinking water. There would be no impacts to environmental justice under the No Action alternative.

#### ***Proposed Action***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new well. The Proposed Action would not disproportionately affect minority or low-income communities. There would be a negligible increase in employment and income for the Rancheria associated with this project, which would be entirely beneficial.

#### ***Cumulative Effects***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new well. The Proposed Action would have no cumulative impact on environmental justice.

## **3.7 Indian Trust Assets**

### **3.7.1 Affected Environment**

Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the U.S. is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the U.S. The characterization and application of the U.S. trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

Consistent with President William J. Clinton's 1994 memorandum, "Government-to-Government Relations with Native American Tribal Governments," Bureau of Reclamation (Reclamation) assesses the effect of its programs on tribal trust resources and federally-recognized tribal governments. Reclamation is tasked to actively engage federally-recognized tribal governments and consult with such tribes on government-to-government level (Federal Register, Vol. 59, No. 85, May 4, 1994, pages 22951 -22952) when its actions affect ITAs. The U.S. Department of the Interior (DOI) Departmental Manual Part 512.2 ascribes the responsibility for ensuring protection of ITAs to the heads of bureaus and offices (DOI 1995). It is the general policy of the DOI to perform its activities and programs in such a way as to protect ITAs and avoid adverse effects whenever possible. The Rancheria's proposed action would be implemented to ensure compliance with this policy. In addition, Reclamation would comply with procedures contained in Departmental Manual Part 512.2, guidelines, which protect ITAs. DOI is required to "protect and preserve Indian trust assets from loss, damage, unlawful alienation, waste, and depletion" (DOI 2000). Reclamation is responsible for assessing whether to provide ARRA funds to the Rancheria for the purposes of drilling and developing a production well and electrical power would have the potential to affect ITAs. Reclamation will comply with procedures contained in Departmental Manual Part 512.2, guidelines, which protect ITAs.

The proposed action does not have a potential to affect Indian Trust Assets. The project is inside Cedarville Reservation.

### **3.7.2 Environmental Consequences**

#### ***No Action***

Under the No Action alternative, Reclamation would not provide funds under ARRA for the purposes of establishing a new well. Without the additional infrastructure, in the event of drought, the Rancheria may be unable to provide reliable drinking water. There would be no impacts to ITAs under the No Action alternative.

#### ***Proposed Action***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new well. Reclamation has determined that the Proposed Action would not impact the Cedarville Rancheria. Any affect on the Rancheria would be entirely beneficial with a negligible increase in employment and income associated with implementation of the Proposed Action.

#### ***Cumulative Effect***

The Proposed Action is for Reclamation to provide ARRA funds to the Rancheria to establish a new well. The Proposed Action would have no cumulative impact on ITAs.

## **3.8 Climate Change**

### **3.8.1 Affected Environment**

The United Nations Intergovernmental Panel on Climate Change predicts that changes in the earth's climate will continue through the 21st century and that the rate of change may increase significantly in the future because of human activity. Many researchers studying California's climate believe that changes in the earth's climate have already affected California and will continue to do so in the future. Climate change may seriously affect the State's water resources. Temperature increases could affect water demand and aquatic ecosystems. Changes in the timing and amount of precipitation and runoff could occur.

Climate change is identified in the 2005 update of the California Water Plan (Bulletin 160-05) as a key consideration in planning for the State's future water management. The 2005 Water Plan update qualitatively describes the effects that climate change may have on the State's water supply. It also describes efforts that should be taken to quantitatively evaluate climate change effects for the next Water Plan update.

### **3.8.2 Environmental Consequences**

#### **No Action**

Under the No Action Alternative, the Rancheria would not drill a new production well. The Rancheria would not be able to provide more dependable water supplies to the Rancheria under emergency conditions. Under this alternative, there would be no effect on climate change.

#### ***Proposed Action***

The Proposed Action, would allow Reclamation to provide ARRA funds to the Rancheria for the purposes of drilling and establishing a production well. The Proposed Action would not include any significant change on the composition of the atmosphere and therefore would not result in adverse impacts to climate change.

#### ***Cumulative Effects***

The Proposed Action would not result in adverse impacts to climate change and, therefore, would not contribute to cumulative impacts to climate change.

## **4.0 Growth-Inducing, Irreversible and Irretrievable Commitments of Resources**

### **4.1 Growth-Inducing Effects**

The purpose of the project is for Reclamation to provide ARRA funds to the Rancheria for the purposes of drilling a development well, and installing electrical power. The Proposed Action would not directly remove obstacles to growth, result in population increases, or encourage and facilitate other activities that could significantly affect the environment. It is anticipated that land use in the project area would remain the same; therefore, there would be no growth-inducing effects as a result of construction of the proposed alternative.

### **4.2 Irreversible and Irretrievable Commitment of Resources**

The purpose of the project is for Reclamation to provide ARRA funds to the Rancheria for the purposes of drilling a development well and installing electrical power. The installation would require equipment such as a drill rigs, excavator, and backhoe which consumes fossil fuels, and submerged pumps which consumes metals such as aluminum and copper. For the operation of the well, electrical supplied to the wells requires energy that could be supplied by hydropower, renewable sources, or burning of fossil fuels.



## **5.0 Consultation and Coordination**

### **5.1 Federal Laws and Executive Orders**

The following federal laws were considered during the preparation of this EA and the evaluation of the potential impacts from the Proposed Action.

#### **5.1.1 Endangered Species Act (16 USC. 1521 et seq.)**

Section 7 of this Act requires Federal agencies to ensure that all federally associated activities within the United States do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of the critical habitat of these species. Action agencies must consult with the U.S. Fish and Wildlife Service, which maintains current lists of species that have been designated as threatened or endangered, to determine the potential impacts a project may have on protected species. Reclamation has determined that the Proposed Action would have “no effect” on federally proposed or listed threatened and endangered species or their proposed or designated critical habitat. No further consultation is required under Section 7 of the Endangered Species Act.

#### **5.1.2 Migratory Bird Treaty Act (16 USC § 703 ET SEQ.)**

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg would be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns. Implementation of the Proposed Action, specifically construction of the well and power supply facilities, could result in the loss of some trees, potentially used for nesting by migratory birds.

#### **5.1.3 National Historic Preservation Act (16 USC 470 et seq.)**

The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation which outlines the Federal Government’s responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking listed on cultural resources on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion on the National Register are referred to as historic properties.



#### **5.1.4 Environmental Justice (Executive Order 12898)**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, as amended, directs federal agencies to develop an Environmental Justice Strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. According to the Council on Environmental Qualities guidance, agencies should consider the composition of the affected area to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action, and if so where there may be disproportionately high and adverse environmental effects. The Proposed Action could have a negligible beneficial impact on environmental justice by temporarily increasing employment and income during installation of the new well.

### **6.0 List of Preparers**

Brad Hubbard, Natural Resources Specialist  
Amy Barnes, Archeologist  
Patricia Rivera, Native American Affairs Specialist

### **7.0 References**

California Natural Diversity Database (CNDDDB). 2010. Accessed CNDDDB/ArcMap geospatial data for the project vicinity on July 19, 2010. California Department of Fish and Game, Sacramento, California.

Crawford, Karen L. 2010. *Cultural Resources Inventory for ARRA Tribal Wells and Water Projects*, Cedarville Rancheria, Fort Bidwell Indian Community, and Pit River Tribe of California, Modoc County, California, Reclamation #s 10-NCAO-215, 10-LBAO-139, 10-NCAO-154. Prepared by ICF International. Report on file at the Bureau of Reclamation, Mid-Pacific Regional Office, Sacramento, California.

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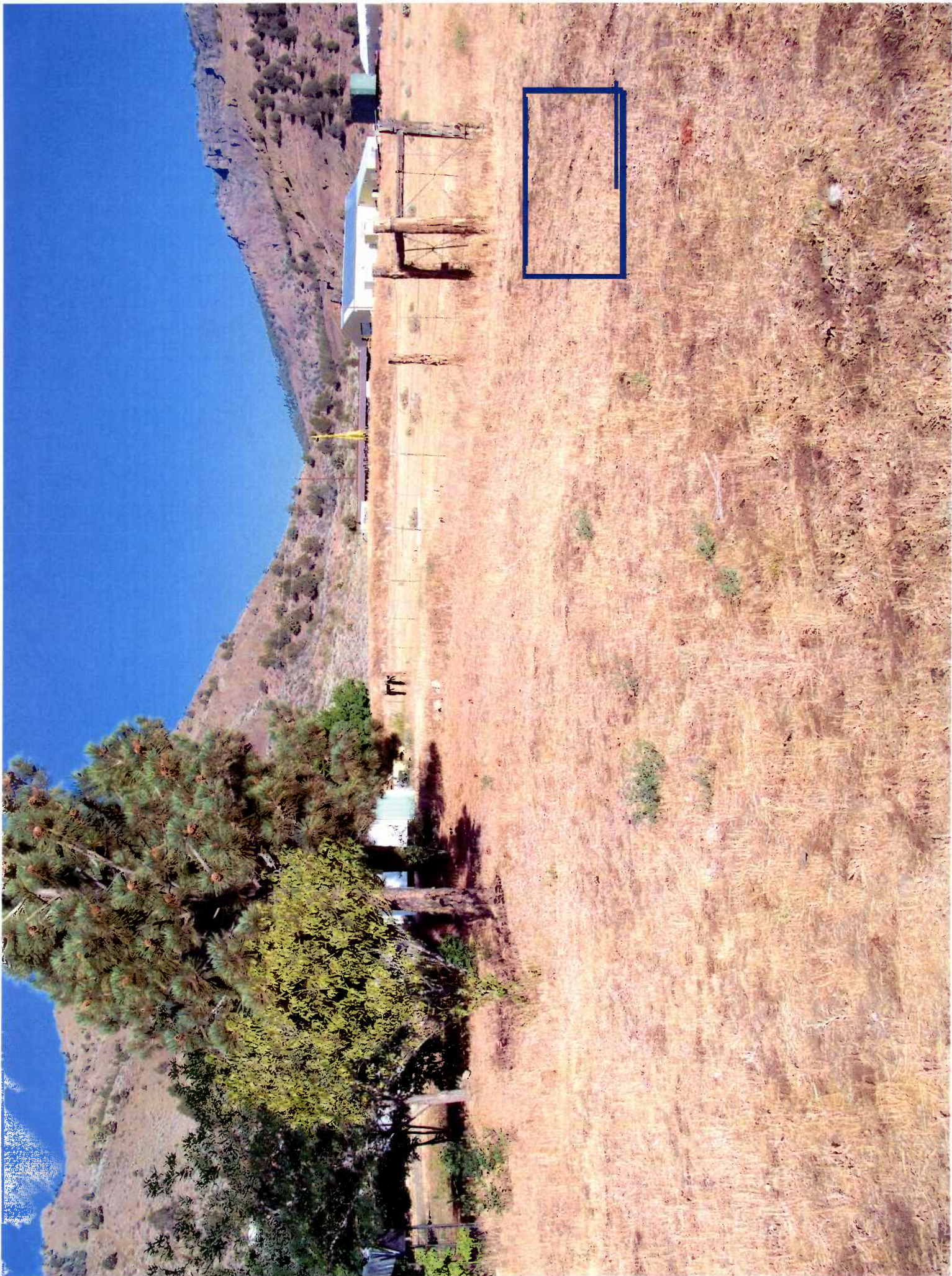
U.S. Fish and Wildlife Service (FWS). 2010. Accessed on July 19, 2010 of the following website:  
[http://www.fws.gov/klamathfallsfwo/es/species\\_list/Modoc%20County%20Species%20List.pdf](http://www.fws.gov/klamathfallsfwo/es/species_list/Modoc%20County%20Species%20List.pdf)

to search for threatened or endangered species that have potential to occur in Modoc County, California.

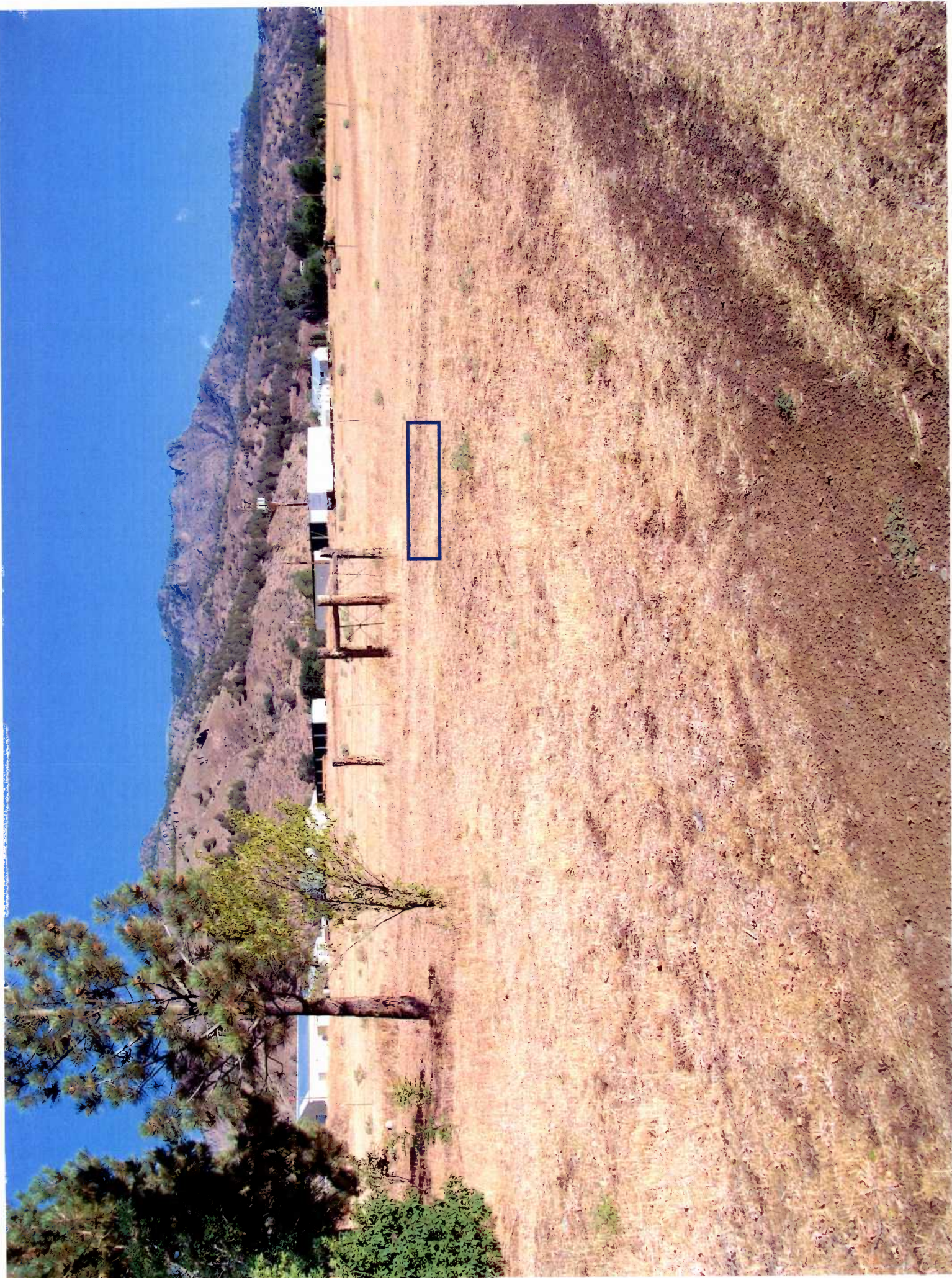
# Appendix A

## Photos











# **Appendix B**

**US Fish and Wildlife Service**

**List of Listed Proposed, and Candidate Species That May Occur in Modoc, County, CA**





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
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### LISTED, PROPOSED, AND CANDIDATE SPECIES THAT MAY OCCUR IN MODOC COUNTY, CALIFORNIA

#### Status: **Endangered**

Phylum	Common Name	Scientific Name	Critical Habitat
Fish	Modoc sucker	Catostomus microps	Designated
Fish	Lost River sucker	Deltistes luxatus	Proposed
Fish	Shortnose sucker	Chasmistes brevirostris	Proposed
Plant	Green's tuctoria	Tuctoria greenei	Designated

#### Status: **Threatened**

Phylum	Common Name	Scientific Name	Critical Habitat
Bird	Northern spotted owl	Strix occidentalis caurina	Designated
Plant	Slender Orcutt grass	Orcuttia tenuis	Designated

#### Status: **Candidate**

Phylum	Common Name	Scientific Name
Amphibian	Oregon spotted frog	Rana pretiosa
Bird	Yellow-billed cuckoo	Coccyzus americanus occidentalis
Bird	Greater Sage-grouse	Centrocercus urophasianus
Mammal	Fisher	Martes pennanti
Plant	Soldier Meadow cinquefoil	Potentilla basaltica